

CLAIMS

1. A combined system for treating an oil and/or gas well, comprising:

a single trailer having mounted thereon:

5 a single engine for providing prime power for the operation of pumps and motors mounted on said single trailer;

a reel of coiled tubing for introducing well treatment fluids into a well;

a coiled tubing injection unit, wherein said coiled tubing injection unit can advance said coiled tubing into a wellbore;

10 a fluid pumping system for pumping fluids into a wellbore; and

a tank of liquid nitrogen,

said coiled tubing injection unit, said fluid pumping system, and said tank of liquid nitrogen each being responsive to the operation of said engine.

15 2. The system according to Claim 1 further comprising a crane for picking up and lowering said coiled tubing injection unit.

3. The system according to Claim 2 wherein said crane being responsive to the operation of said single engine.

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“Three in One Combined Power Unit for Nitrogen System, Fluid System, and Coiled Tubing System”

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4. The system according to Claim 1, including in addition thereto, a first hydraulic pump which can be driven by said engine for manipulating said coiled tubing injection unit.

5. The system according to Claim 4, including in addition thereto, a second hydraulic pump
5 driven by said engine and a crane for picking up and lowering said coiled tubing injection unit, said second hydraulic pump being for manipulating said crane.

6. The system according to Claim 5, including in addition thereto, a third hydraulic pump driven by said engine for manipulating the output of said tank of liquid nitrogen.

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7. The system according to Claim 6, including in addition thereto, a fourth hydraulic pump driven by said engine for manipulating said fluid pumping system.

8. A combined system for treating an oil and/or gas well, comprising:

15 at least one skid having mounted thereon:

a single engine for providing prime power for the operation of pumps and motors mounted on said at least one skid;

a reel of coiled tubing for introducing well treatment fluids into a well;

a coiled tubing injection unit, wherein said coiled tubing injection unit can
20 advance said coiled tubing into a wellbore;

a fluid pumping system for pumping fluids into a wellbore; and

***“Three in One Combined Power Unit for
Nitrogen System, Fluid System, and
Coiled Tubing System”***

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and Edward R. Lamb

a tank of liquid nitrogen,

said coiled tubing injection unit, said fluid pumping system, and said tank of liquid nitrogen each being responsive to the operation of said engine.

5 9. The system according to Claim 8 further comprising a crane for picking up and lowering said coiled tubing injection unit.

10. The system according to Claim 9 said crane being responsive to the operation of said single engine.

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11. The system according to Claim 8, including in addition thereto, a first hydraulic pump which can be driven by said engine for manipulating said coiled tubing injection unit.

12. The system according to Claim 11, including in addition thereto, a second hydraulic pump
15 which can be driven by said engine and a crane for picking up and lowering said coiled tubing injection unit, said second hydraulic pump being for manipulating said crane.

13. The system according to Claim 12, including in addition thereto, a third hydraulic pump which can be driven by said engine for manipulating the output of said tank of liquid nitrogen.

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***“Three in One Combined Power Unit for
Nitrogen System, Fluid System, and
Coiled Tubing System”***

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14. The system according to Claim 13, including in addition thereto, a fourth hydraulic pump which can be driven by said engine for manipulating said fluid pumping system.

15. A combined system for treating an oil and/or gas well, comprising:

5 a single trailer having mounted thereon:

single engine for providing prime power for the operation of pumps and motors mounted on said single trailer;

a reel of coiled tubing for introducing well treatment fluids into a well;

10 a coiled tubing injection unit, wherein said coiled tubing injection unit can advance said coiled tubing into a wellbore;

a fluid pumping system for pumping fluids into a wellbore; and

a source of gaseous nitrogen,

said coiled tubing injection unit, said fluid pumping system, and said source of gaseous nitrogen each being responsive to the operation of said engine.

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16. The system according to Claim 15 further comprising a crane for picking up and lowering said coiled tubing injection unit.

17. The system according to Claim 16, said crane being responsive to the operation of said
20 single engine.

***“Three in One Combined Power Unit for
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18. The system according to Claim 15, wherein said source of gaseous nitrogen is a nitrogen generator which has a capability for gathering gaseous nitrogen from the earth's atmosphere.

19. The system according to Claim 15, wherein said source of gaseous nitrogen comprises
5 at least one tank of compressed nitrogen gas.

20. The system according to Claim 15, wherein said source of gaseous nitrogen comprises a plurality of tanks of compressed nitrogen gas.

10 21. A combined modular system for treating an oil and/or gas well, comprising:
a power unit skid; and
an operations skid, wherein said power unit skid further comprises a single prime mover engine, a plurality of hydraulic pumps, a hydraulic reservoir for said plurality of hydraulic pumps, at least one high pressure fluid pump, and at least one fluid charge pump, and
15 wherein said operations skid further comprises at least one telescoping operator's console, at least one coiled tubing hydraulic distribution manifold, at least one low pressure nitrogen charge pump, at least one nitrogen system hydraulic distribution manifold, at least one high pressure nitrogen injection pump, at least one nitrogen evaporator, and at least one heat exchanger.

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***“Three in One Combined Power Unit for
Nitrogen System, Fluid System, and
Coiled Tubing System”***

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22. The system according to claim 21, wherein said power unit skid and said operations skid are combined on a single skid.

23 The system according to Claim 21 further comprising a crane for picking up and lowering
5 said coiled tubing injection unit.

24. The system according to Claim 23 said crane being responsive to the operation of said single engine.

10 25. A combined system for treating an oil and/or gas well, comprising:

a barge having mounted thereon:

a single engine for providing prime power for the operation of pumps and motors
mounted on said barge;

a reel of coiled tubing for introducing well treatment fluids into a well;

15 a coiled tubing injection unit, wherein said coiled tubing injection unit can
advance said coiled tubing into a wellbore;

a fluid pumping system for pumping fluids into a wellbore; and

a tank of liquid nitrogen,

said coiled tubing injection unit, said fluid pumping system, and said tank of liquid nitrogen each
20 being responsive to the operation of said engine.

***“Three in One Combined Power Unit for
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26. The system according to Claim 25 further comprising a crane for picking up and lowering said coiled tubing injection unit.

27. The system according to Claim 26 said crane being responsive to the operation of said
5 single engine.

28. A method for operating a combined system for treating an oil and/or gas well using a single prime moving engine, comprising:

providing a single engine;

10 providing a reel of coiled tubing;

providing a coiled tubing injection unit;

providing a crane for picking up and lowering said coiled tubing injection unit;

providing a fluid pumping system;

providing a tank of liquid nitrogen;

15 providing a nitrogen system, said tank of liquid nitrogen being fluidly connected to said nitrogen system, wherein said nitrogen system comprises at least one low pressure nitrogen charge pump, at least one nitrogen system hydraulic distribution manifold, at least one high pressure nitrogen injection pump, at least one nitrogen evaporator, and at least one heat exchanger; and

20 powering said coiled tubing injection unit, said fluid pumping system, and said nitrogen system using said single engine.

***“Three in One Combined Power Unit for
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29. The method according to Claim 28 further comprising powering said crane for picking up and lowering said coiled tubing injection unit using said single engine.